

Notice of Allowability

Application No.

10/812,284

Applicant(s)

SADRI ET AL.

Examiner

Jean A. Gelin

Art Unit

2617

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address--

All claims being allowable, PROSECUTION ON THE MERITS IS (OR REMAINS) CLOSED in this application. If not included herewith (or previously mailed), a Notice of Allowance (PTOL-85) or other appropriate communication will be mailed in due course. **THIS NOTICE OF ALLOWABILITY IS NOT A GRANT OF PATENT RIGHTS.** This application is subject to withdrawal from issue at the initiative of the Office or upon petition by the applicant. See 37 CFR 1.313 and MPEP 1308.

1. ☒ This communication is responsive to 11/19/07.
2. ☒ The allowed claim(s) is/are 1, 2, 10-15, 5, 6, 8, 9, 16, 17-21, 23-25, 40, 41, 26-30, 42, 43, 31, 33, 34-36, 44, and 37-39, renumbered as 1-39 respectively.
3. ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some* c) ☐ None of the:
1. ☐ Certified copies of the priority documents have been received.
2. ☐ Certified copies of the priority documents have been received in Application No. _____.
3. ☐ Copies of the certified copies of the priority documents have been received in this national stage application from the International Bureau (PCT Rule 17.2(a)).

* Certified copies not received: _____.

Applicant has THREE MONTHS FROM THE "MAILING DATE" of this communication to file a reply complying with the requirements noted below. Failure to timely comply will result in ABANDONMENT of this application.

THIS THREE-MONTH PERIOD IS NOT EXTENDABLE.

4. ☐ A SUBSTITUTE OATH OR DECLARATION must be submitted. Note the attached EXAMINER'S AMENDMENT or NOTICE OF INFORMAL PATENT APPLICATION (PTO-152) which gives reason(s) why the oath or declaration is deficient.
5. ☐ CORRECTED DRAWINGS (as "replacement sheets") must be submitted.
- (a) ☐ including changes required by the Notice of Draftsperson's Patent Drawing Review (PTO-948) attached
- 1) ☐ hereto or 2) ☐ to Paper No./Mail Date _____.
- (b) ☐ including changes required by the attached Examiner's Amendment / Comment or in the Office action of Paper No./Mail Date _____.
- Identifying indicia such as the application number (see 37 CFR 1.84(c)) should be written on the drawings in the front (not the back) of each sheet. Replacement sheet(s) should be labeled as such in the header according to 37 CFR 1.121(d).
6. ☐ DEPOSIT OF and/or INFORMATION about the deposit of BIOLOGICAL MATERIAL must be submitted. Note the attached Examiner's comment regarding REQUIREMENT FOR THE DEPOSIT OF BIOLOGICAL MATERIAL.

Attachment(s)

- | | |
|--|---|
| 1. <input type="checkbox"/> Notice of References Cited (PTO-892) | 5. <input type="checkbox"/> Notice of Informal Patent Application |
| 2. <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948) | 6. <input type="checkbox"/> Interview Summary (PTO-413),
Paper No./Mail Date _____ |
| 3. <input checked="" type="checkbox"/> Information Disclosure Statements (PTO/SB/08),
Paper No./Mail Date _____ | 7. <input type="checkbox"/> Examiner's Amendment/Comment |
| 4. <input type="checkbox"/> Examiner's Comment Regarding Requirement for Deposit
of Biological Material | 8. <input checked="" type="checkbox"/> Examiner's Statement of Reasons for Allowance |
| | 9. <input type="checkbox"/> Other _____ |

1. This is in response to the Applicant's arguments and amendments filed on 11/19/07 in which claims 1, 8, 9, 18, 26, 31, 34, and 37 have been amended, claims 40-44 have been added, and claims 7, 22, and 32 have been canceled. Claims 1, 2, 5, 6, 8-21, 23-31, and 33-44 are currently pending.

Allowable Subject Matter

2. After a further search and thorough examination of the present application and in view of the applicant's arguments and amendments, claims 1, 2, 10-15, 5, 6, 8, 9, 16, 17-21, 23-25, 40, 41, 26-30, 42, 43, 31, 33, 34-36, 44, and 37-39, renumbered as 1-39 respectively, are found to be in condition of allowance.

3. The following is an examiner's statement of reasons for allowance: the prior art teaches a receiver having a demultiplexer, an FFT processor in each demodulator when OFDM is employed for data transmission, and each frequency sub-channel from the FFT are independently processed to process data in MIMO communication system utilizing channel state information and improve system performance. The prior art further teaches (Walton, fig. 3), a demultiplexer to separate information signal into multiple portions D1...Dn corresponding to frequency sub-channels 310A... 310L. Walton further teaches each demodulator includes an FFT which converts the received multicarrier signal to a frequency domain representation. At least two demodulators are disclosed in Walton corresponding to a plurality of FFT.

On the other hand, the Applicant teaches, inter alia, a wireless apparatus comprising a receiver chain includes an adaptive parallel to serial converter to receive

output streams from said plurality of Fourier transform units and to merge said output streams into a serial stream based on control information from said adaptive channelization controller, and said adaptive channelization controller to determine which of said plurality of predetermine frequency subchannels to use to support a multicarrier wireless link based on channel state information. These limitations, in conjunction with all limitations of the independent claims, have not been disclosed, taught, or made obvious over the prior arts of record.

The Applicant further teaches, inter alia, individually transforming each of said plurality of frequency sub-channel components from a time domain representation to a frequency domain representation, wherein individually transforming generates a plurality of output streams that includes at least a first stream for a first frequency sub-channel component in said plurality of frequency sub-channel components and a second stream for a second frequency sub-channel component in said plurality of frequency sub-channel components; and adaptively parallel to serial converting said plurality of output streams to merge said output streams into a serial stream based on said sub-channel adaptation information. These limitations, in conjunction with all limitations of the independent claims, have not been disclosed, taught, or made obvious over the prior arts of record.

The Applicant further teaches, inter alia, converting said frequency domain representations resulting from individually transforming said plurality of frequency sub-channel components to a single serial stream based on control information received from an adaptive channelization controller, said control information identifying which

sub-channels within a plurality of available sub-channels are being used for a wireless link. These limitations, in conjunction with all limitations of the independent claims, have not been disclosed, taught, or made obvious over the prior arts of record.

Any comments considered necessary by applicant must be submitted no later than the payment of the issue fee and, to avoid processing delays, should preferably accompany the issue fee. Such submissions should be clearly labeled "Comments on Statement of Reasons for Allowance."

4. Any inquiry concerning this communication or earlier communications from the examiner should be directed to Jean A. Gelin whose telephone number is (571) 272-7842. The examiner can normally be reached on 9:30 AM to 7:00 PM.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Charles Appiah can be reached on (571) 272-7904. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Application/Control Number:
10/812,284
Art Unit: 2617

Page 5

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free). If you would like assistance from a USPTO Customer Service Representative or access to the automated information system, call 800-786-9199 (IN USA OR CANADA) or 571-272-1000.

JGelin
December 4, 2007

JEAN GELIN
PRIMARY EXAMINER

A handwritten signature in black ink, appearing to read "Jean Gelin", written in a cursive style.